

REPORT

A Road Map for Worldwide Financial Services Innovation

George Hofheimer, Chief Knowledge Officer, Filene Research Institute

Andrew Downin, Innovation Director, Filene Research Institute

Linda Young, Founder, ponderpickle

ACKNOWLEDGMENTS

Filene thanks Desjardins for its generous support and curiosity in bringing the innovation topic to a larger audience.

We also wish to thank PSCU for their ongoing support, especially around the innovation topic.



Table of Contents

4	EXECUTIVE SUMMARY
6	CHAPTER 1 What Is Innovation?
9	CHAPTER 2 The Role of Innovation in Financial Services
16	CHAPTER 3 Global Financial Innovations
30	CHAPTER 4 The Filene Method: Delivering Financial Innovation
42	CHAPTER 5 Conclusions and Recommendations
44	ENDNOTES
48	LIST OF FIGURES
50	ABOUT THE AUTHORS
52	ABOUT FILENE

Executive Summary

Overview

In financial services, innovation works best when it can deliver increased benefits to members. The Filene approach was designed to help innovators optimize their abilities to ideate, test, and implement cutting edge solutions.

MEET THE AUTHORS



George Hofheimer
Chief Knowledge Officer,
Filene Research Institute



Andrew Downin
Innovation Director,
Filene Research Institute



Linda Young
Founder, ponderpickle

In a recent blog post on innovation, Joseph E. Stiglitz, who is, among other things, a Nobel laureate in economics and a professor at Columbia University, discussed what he described as “the innovation enigma.” In short, he says there isn’t always a clear link between innovation and GDP statistics, which he equates with improved living standards. Stiglitz goes on to discuss the fact that innovation in the financial services sector—especially as illustrated by innovations popular before the 2008 economic collapse—often meant “devising better ways of scamming others, manipulating markets without getting caught (at least for a long time), and exploiting market power.”¹

Not exactly the rosy glow that “innovation” usually engenders, huh? Is it possible for innovation in the financial services sector to create positive results for the “little guy?” Or is financial services innovation, by its very nature, just about creating profits?

What Is the Research About?

To answer those questions, this report starts with a brief look at general innovations over time and then moves on to business innovations, using Peter Drucker’s seven areas of opportunity for innovation as a framework. The key message for innovation in every sector: A truly great innovation is defined by the value it creates for society.

The report then moves on to innovations specifically linked to financial services. We examine financial innovation milestones over time—reaching all the way back to 9000 BC!—before focusing on innovations of the last half century. To help us determine whether these innovations did more than create wealth for the financial services sector, we put each to a litmus test designed by Robert Litan, a senior fellow in the Economic Studies Program at the Brookings Institution. The three qualitative dimensions that he uses to determine the merits of an innovation are:

- Better/wider access.
- Greater convenience.
- Increased productivity/GDP.

Not surprisingly, when we applied these metrics to recent financial services innovations, the results were decidedly mixed—confirming that Stiglitz has reason to be concerned.

Last, we discuss the role of cooperatives in financial services and the fact that innovation works best when it doesn't just *happen* but is actively sought out and developed. To illustrate this, we walk through what we call the Filene Method—a six-step process that can help an innovator move from insights to results in the financial services sector. The Filene Method was designed over 10 years by Filene's innovation think tank, called i³ (Ideas, Innovation, Implementation). The method has been used to develop and test hundreds of financial services innovations.

What Are the Credit Union Implications?

Cooperative financial institutions are mandated to put people before profits, so they must apply the filter of increased member benefit to every innovation they consider. This adds a layer of time and complexity to every decision cooperatives make, but there are plenty of opportunities to innovate and benefit members at the same time.

Good examples include:

- **Mobile banking**—This has been especially critical in developing countries that lack the infrastructure to support traditional banking service channels.
- **Microfinancing**—Examples abound of how microfinancing has helped low-income people around the world improve their quality of life.
- **Prize-linked savings campaigns**—These have a proven track record of increasing savings levels around the world, especially among low-income, financially vulnerable nonsavers.

Although Stiglitz isn't wrong to be concerned about the impact of financial innovations on society, we believe there are many reasons to be hopeful, especially in the cooperative financial services world.

A Road Map for Worldwide Financial Services Innovation



CHAPTER 1

What Is Innovation?

We cannot solve our problems by using the same thinking we used when we created them. —ALBERT EINSTEIN

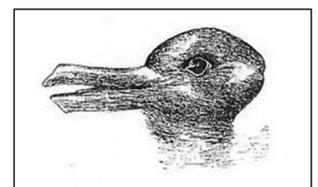
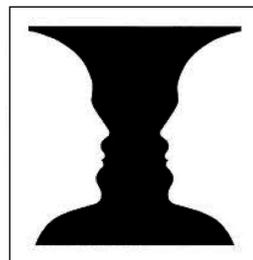
Defining Innovation

Explaining innovation is like being asked to describe what you see in an optical illusion like the one shown in Figure 1. Is that a vase, or two faces looking toward each other? A duck, or a rabbit? Just as there are different ways to see these images, there are different ways to explain what innovation is.

Like the optical illusions, innovation considers both form and function. Innovation encompasses the process

FIGURE 1

OPTICAL ILLUSIONS: RUBIN VASE BY EDGAR RUBIN AND RABBIT AND DUCK BY LUDWIG WITGENSTEIN



of developing new ideas as well as putting those ideas into action. Innovation is forward thinking and emphasizes the need for a better method or idea that results in a meaningful purpose, something “original, new, and important—in whatever field—that breaks in to (or obtains a foothold in) a market or society.”²

The term “innovation” was originally associated with science and industry and was introduced into the economic arena during the Industrial Revolution. Innovation had generally positive connotations during this period with the issuance of ever-increasing numbers of patents, sizeable government investment in research and development, and the introduction of consumerism. The shift from invention to innovation was later captured by Austrian economist Joseph Schumpeter in 1942, who “defined invention as an act of intellectual creativity undertaken without any thought given to its possible economic import, while innovation happens when firms figure out how to craft inventions into constructive changes in their business model.”³

This was an era of “creative destruction,” whereby old models of thinking and doing were destroyed and replaced with new ones—a time of disruptions that led to radical innovations, which in turn created new industries and economic growth, thus reinforcing the value-creation trait of innovation.⁴

The Historical Reach of Innovation

Innovation has had a generally positive impact on society and the lives of people throughout history. At the most basic level, it can be organized into four main categories, as shown in Figure 2. As these examples so clearly capture, innovation has had a significant impact on our day-to-day lives.

FIGURE 2

THE FOUR MAIN CATEGORIES OF INNOVATION

Innovation category	Examples
Saves lives or improves quality of life	Anesthetics, surgery, vaccines, antibiotics
Fundamentally alters how we live and what we are able to do	Mathematics, money/currency, property ownership, Internet
Frees people from need to produce items to meet their basic needs (e.g., food, shelter, clothing)	Domesticated animals, agriculture, participative democracy
Amplifies and improves standard of living for entire populations in modern economies	Printing, mobile phones

Source: Larry Keeley, “History’s Greatest Innovation,” *Business Week*, July 2, 2003, [images.businessweek.com/ss/07/02/0216_innovations/index_01.htm](https://www.businessweek.com/ss/07/02/0216_innovations/index_01.htm).

Innovation: The Business Way

Innovation has also played a critical role in economic development, trade, and business, evolving and shifting as opportunities surface. In a 1985 article titled “The Discipline of Innovation,” Peter Drucker detailed the seven areas from which opportunities for business innovation originate, both inside and outside a company or industry (Figure 3).

FIGURE 3

DRUCKER’S SEVEN AREAS OF OPPORTUNITY FOR BUSINESS INNOVATION

Area for opportunity within company/industry	Example
Unexpected occurrences	During the 1950s, big mainframes were used exclusively for scientific R&D. IBM saw that these systems had good crossover potential for business activities such as payroll; the incumbent, Univac, didn’t want to invest in this area. IBM made the investment and within five years became the leader in the computer industry.
Incongruities (assumption differs from reality)	When it comes to managing the cost of operating ocean freighters, it might seem like freighting activities—those associated with time at sea—would be the main drivers of cost. The truth is that port/idle times are actually more of a concern. Savvy operators recognized that placing multiple shipping containers on the freighters could optimize downtime revenues, which resulted in a huge change to the business model.
Process needs	The reach and size of the newspaper industry would not have been possible without Ottmar Mergenthaler’s Linotype. This allowed for rapid production and high-volume output, which created vast distribution and reach. This created an appealing opportunity for advertisers and launched the media business.
Industry and market shifts	When an industry grows quickly (i.e., 40% in 10 years), its construct shifts. Established companies focused on defending their market share are not prepared for the newcomers, and the newcomers start to shift the rules of the game. An example: long tail businesses that sell a few of many items, like the iTunes Store, competing with traditional retailers that need to find blockbuster items in order to break even.
Demographic changes	The hourglass shape of the North American population captures two large cohorts that will shape the marketplace for years to come: youthfully minded Baby Boomers who will demand innovative elder care, and Millennials who will change workplace practices and leadership norms.
Changes in perception	When consumer perceptions begin to shift, opportunities for innovation surface. Processed foods—once considered a convenient, tasty alternative to cooking—are now viewed as unhealthy as consumers carefully scrutinize ingredient lists and processing methods. This shift has opened up opportunities for innovation in food preparation and delivery methods, such as organic and locally grown foods.
New knowledge (scientific, technical, or social)	New knowledge is usually associated with the convergence of different industries and long lead times before launching into the marketplace. For instance, although the first digital computer didn’t appear until 1946, all of its various components—such as binary code, punch cards, and the electronic switch—had been available since 1918.

Source: Peter Drucker, “The Discipline of Innovation,” *Harvard Business Review* 63, no. 3 (1985): 67–72.

Once these opportunities are uncovered, Drucker stated, a leap of imagination is required in order for these opportunities to lead to a series of activities that will achieve the most beneficial and desired outcomes.

Drucker also believed that innovation:

- Is both conceptual and perceptual. Uncovering opportunities requires talking to people, looking at the data, and tapping into the left and right sides of the brain.
- Is often simple and focused on a specific need rather than complex and serving all needs.
- Must be closely tied to marketplace dynamics, competition, and consumers in order to be successful and create a positive impact for society and business.

Great innovations are defined by the value they create for society. Business innovation helps to drive economic growth and, in doing so, extends value by improving the quality of people's lives and providing better access to goods that allow them to meet their basic needs. Given the importance of business innovation to a society's overall health, it's critical to understand that opportunities for such innovation can come from different sources. The external and internal conditions that Drucker studied should be kept in mind as we continue the exploration of innovation and examine more specifically financial services innovation in the following chapter.

CHAPTER 2

The Role of Innovation in Financial Services

The Financial Services System

At the heart of finance is money, and how that money is exchanged creates economic value and drives economic growth. The activities that encompass the financial services industry support other industries by providing them with the means to operate and grow. The financial services industry has its own set of complex systems and activities, and some of these activities spill into other industries. In short, financial innovation lubricates innovation in other industries.

Before we can explore the role of innovation in financial services, we must first understand what the industry actually does. Financial services and the institutions that drive this industry have six primary functions, according to Robert C. Merton, a Nobel laureate in economics from MIT (Figure 4).⁵

Against this backdrop, innovation has been defined as “the act of creating and then popularizing new financial instruments as well as new financial technologies, institutions, and markets.”⁶

Some see financial innovations as being less inventive than those in other industries, a claim which is supported by the fact that most financial innovations represent incremental refinements or improvements of existing processes or products. Furthermore, there is often a strong link between an innovation in the design of the process to deliver a financial product and the innovation of the product itself. For example, residential mortgages were designed to offer credit to consumers for large purchases and supported by credit policies put in place to help financial institutions manage the associated risk.

There’s also evidence to suggest that financial innovations are often designed to benefit the financial institution more than the consumer. For example, financial institutions have invested ample time and resources to fine-tune mortgage credit policies and adjudication processes while delivering product options (i.e., term lengths, interest rates) to the end consumer. However, as other needs of the financial institution come into play, innovative improvements are focused less on a product’s benefits to consumers and more on how the product’s features can benefit the financial institution in its other key functions. For instance, mortgage securitization (a financial innovation) allows financial institutions to pool existing funds to access more capital (one of the primary functions identified by Merton). Consumers benefit by having more funds to access, but the fundamental product features consumers shop for (e.g., loan amount, type of rate) remain largely unchanged.

FIGURE 4

THE SIX PRIMARY FUNCTIONS OF THE FINANCIAL SYSTEM



Source: Robert C. Merton, “A Functional Perspective on Financial Intermediation,” *Financial Management* 24 (Summer 1995): 23–41.

Financial Innovation Milestones

Since the beginning of trade and bartering in 9000 BC, financial innovations have advanced and evolved according to Merton’s six primary functions of financial institutions—though the majority of the innovations shown in Figure 5 involve the development and enhancement of payment for the exchange of goods and services. Whether by creating standardized currencies, designing ways to extend access through credit, or storing and dispensing funds (e.g., ATMs), our ability to manage money in a systematic and secure fashion has fostered many innovations. And because money fuels consumers’ daily activities, it’s important that these financial innovations create value as described in Chapter 1.

FIGURE 5

FINANCIAL INNOVATION MILESTONES

Time frame	Innovation	Type of innovation (based on Merton’s categories)					
		Payment system	Pooling funds for large-scale use	Price info across industries	Managing uncertainty and controlling risk	Transfer of resources across time, regions, industries	Dealing with asymmetrical info or incentives across parties
9000 BC onwards	Medium of exchange • Bartering of produce and cattle	★				★	
2500–400 BC	Credit agreements • Mesopotamian tablets with loan and interest paid recorded	★			★	★	
1000 BC	Metal money and coins • Early Chinese “tool money” and primitive coins introduced	★					
700–600 BC	Modern coinage introduced • Lydia, western Turkey	★					
321–185 BC	Bills of exchange • Bills of exchange, promissory notes used in Mauryan Empire, India	★					
14th century	Bonds • Renaissance Italy issues bonds to support wartime activities		★			★	
1602	Publicly listed stock • Dutch East India Company— Amsterdam Stock Exchange	★	★			★	

FIGURE 5

FINANCIAL INNOVATION MILESTONES (CONTINUED)

Time frame	Innovation	Type of innovation (based on Merton's categories)					
		Payment system	Pooling funds for large-scale use	Price info across industries	Managing uncertainty and controlling risk	Transfer of resources across time, regions, industries	Dealing with asymmetrical info or incentives across parties
1688	Insurance brokerage • Edward Lloyd's London coffee house, center for marine insurance				★		★
18th century	Options • First call options on Dutch stocks					★	★
1742	Monopoly on banknote issuance • Bank of England	★					
1774	Mutual funds • Closed-end mutual fund set up by Dutch merchant		★			★	
1938	Secondary mortgages • Fannie Mae establishes secondary market in the United States		★		★		
1946	Venture capital • Private equity firms established in the United States				★	★	★
1958	Modern credit cards • Bank of America launches credit card with revolving credit line • 1950 Diners Club launches first charge card Credit scoring • Fair Isaac FICO score introduced in the United States	★			★		★
1960	ATMs • Patent filed for cash dispenser in the United States • By late 1960s ATMs operational in London	★				★	
1968	Securitization • Ginnie Mae guarantees first mortgage securitization		★				★

FIGURE 5

FINANCIAL INNOVATION MILESTONES (CONTINUED)

Time frame	Innovation	Type of innovation (based on Merton's categories)					
		Payment system	Pooling funds for large-scale use	Price info across industries	Managing uncertainty and controlling risk	Transfer of resources across time, regions, industries	Dealing with asymmetrical info or incentives across parties
1972	Debit cards • City National Bank of Cleveland issues ATM account debit card	★				★	
1973	Point-of-sale terminals • IBM launches POS terminals	★				★	
1983	Modern microfinancing • Muhammad Yunus introduces microfinance banking in Bangladesh	★			★		
	Online banking • Bank of Scotland provides customers with Homelink, which allows for money transfers and payments via TV and telephone	★				★	
1987	Automatic underwriting • Allfinanz begins automatic underwriting for life insurance				★		
1988	International capital requirements • Basel Accord (Basel I) introduced for banks						★
1994	Credit default swaps • JPMorgan structures first CDS		★		★		
1999	Online payment • PayPal launches online payments	★			★		
	Mobile banking • Via SMS technology	★				★	
2004	Usage-based insurance • Pay-as-you drive car insurance introduced by GMAC in the United States				★		
2005	Peer-to-peer lending • First person-to-person lending service without a financial intermediary, Zopa, launches in the UK		★				

Sources: Innovations were identified from Oliver Wyman, “Rethinking Financial Innovation: Reducing Negative Outcomes while Retaining the Benefits,” *World Economic Forum*, 2012; and Robert E. Litan, *In Defense of Much, But Not All, Financial Innovation* (Washington, DC: Brookings Institution, 2010), www.brookings.edu/research/papers/2010/02/17-financial-innovation-litan. The report’s authors then organized the innovations according to Merton’s primary function categories.

Recent Financial Innovations: Focus on the Consumer

In the second half of the twentieth century, financial institutions in the developed world rode the wave of household income and wealth growth, with a focus on delivering innovations that would help consumers maximize or mobilize their savings, make payments, and access credit. Innovations during this period included mortgages, credit and debit cards, and electronic banking (e.g., ATMs) and signaled a new era of choice and access for consumers.⁷

This age of consumer finance saw more people in the developed world gain access to various products and services and bolstered the economy along the way. Mortgages meant there were more home purchases (and more real estate–related jobs); friendlier auto loans led to more vehicles on the road (and more factory jobs).

But variety and choice have sometimes done more harm than good:

- Easier access to money through ATMs, direct deposit, and electronic bill pay meant greater convenience but increased the tendency for consumers to overextend themselves.
- The introduction of credit scoring allowed financial institutions to provide loan access to a wider group of consumers but also drove higher levels of debt and lower levels of personal savings.
- The proliferation of investment vehicles (in the 1950s there were fewer than 100 mutual funds; by 2007 there were over 8,000⁸) meant consumers had many choices—and increased pressure to make the “right” investment decision.
- Alternative financial products such as check cashing and payday lending provided small dollar credit to low-income consumers but increased their vulnerability to overleveraging themselves and taking on additional risk.

The Downsides of Choice

In North America, many consumers have their pick of financial products and services, but access does not guarantee financial savviness or a stress-free financial life.

In the United States, one in five Americans have been late with their mortgage payment or overdrawn on their checking account, while 14% have had to borrow from their retirement savings to manage their immediate financial needs.⁹ In surveys of Canadian households, 70% said they were confident that their standard of living would be sustained through retirement, but only 40% knew how much money they needed to save to accomplish this. And 3 out of 10 Canadians admitted they were struggling with their bills and loan payments.¹⁰

To address the lack of financial savviness among consumers, Thrivent Financial and its subsidiary, brightpeak, are taking a “back to basics” approach with their members. The companies are successfully using home gatherings led by financial guides where families and friends learn financial tips and practice using financial tools—all in a fun and interactive fashion.

In the aftermath of the 2007 banking crisis, several prominent individuals, including Paul Volcker, the former US Federal Reserve chairman, declared themselves unimpressed with the financial innovations of the past 25 years. Volcker said: “How many other [recent] innovations can you tell me that have been as important to the individual as the automatic teller machine, which in fact is more of a mechanical than a financial one? . . . All I know is the economy was rising nicely in the 1950s and 1960s without all these innovations. Indeed, it was quite good in the 1980s without credit default swaps and without securitization and without collateralized debt obligations.”¹¹

Other experts are equally leery of the value of financial innovations. In a 2010 paper, Robert Litan, nonresident senior fellow in the Economic Studies Program at Brookings, used three dimensions to determine the merits of major innovations in recent times: (1) better/wider access, (2) greater convenience, and (3) increased productivity/gross domestic product (GDP). He concluded there were mixed results.¹²

Using these dimensions, the impact of recent financial innovations can be grouped into three categories (Figure 6):

- ➔ **The good:** Innovations that improved access and convenience for the end users (typically consumers) with either a neutral or positive impact on the economy.
- ➔ **The bad:** Innovations that were poorly designed from the start and did not have much positive impact on any of Litan’s dimensions.
- ➔ **The ugly:** Innovations that provided greater access and convenience but were misused, resulting in a negative economic impact and contributing to the financial crisis.

FIGURE 6

RECENT FINANCIAL INNOVATIONS

Good	Bad	Ugly
<ul style="list-style-type: none"> • ATMs • Debit cards • Mutual funds • Credit scoring 	<ul style="list-style-type: none"> • Collateralized debt obligations (CDOs) • Structured investment vehicles (SIVs) 	<ul style="list-style-type: none"> • Credit default swaps (CDSs) • Adjustable-rate mortgages (ARMs) • Home equity lines of credit (HELOCs)

Global Financial Innovations

A plethora of consumer financial innovations swept most of the developed countries after World War II when economies and consumer spending began to flourish. This chapter explores a handful of these and evaluates them against Robert Litan's three dimensions of impact as discussed in Chapter 2: (1) better/wider access, (2) greater convenience, and (3) increased productivity/GDP.

The innovations were selected based on how they address the most important banking needs for consumers today: savings, lending, payments, and investing.

Prize-Linked Savings

Prize-linked savings (PLS) accounts have been in existence around the world for the past three centuries. These accounts—which can also take the form of bonds, as is the case in the UK—differ from traditional savings accounts in that each participant has the opportunity to win a lottery in the form of money or prizes instead of earning a competitive interest rate on balances (in some cases there might be a low interest rate; in others, none).

The UK

In the UK, the government has offered the UK Premium Bond since 1956, and more than 50 years later, it's estimated that 22%–40% of the population holds such bonds. When they first launched in the 1950s as “Savings with a Thrill,” British Prime Minister Harold Macmillian stated they would “appeal to those who are not attracted by the rewards of interest, but do respond to the incentives of fortune.”¹³

Japan

In the mid-1990s, the Jonan Shinkin Bank, a small cooperative bank in Tokyo, introduced a one-year PLS deposit account in the recently deregulated country. In a few days, the bank attracted over US\$300 million (M) in deposits. This spurred 13 other shinkin (cooperative) banks to offer comparable PLS accounts. A similar link between the availability of PLS accounts and corresponding increases in deposits held by the issuing financial institutions was seen in Indonesia in the 1980s and Spain and Argentina in the 1990s.

Pakistan

In Pakistan the government-owned Habib Bank launched its crorepati (multimillionaire) account in 1998 and attracted US\$220M in deposits over a six-month period. Several other local banks quickly followed suit, launching their own PLS accounts. Despite their popularity, less than two years after their debut in the country, PLS accounts were deemed un-Islamic and banks were banned from selling them to Pakistani residents.

Assessing the Value of PLS

While the combined savings and gambling features of PLS accounts are supported in countries around the world, they're not accepted everywhere. In the United States, the features of these accounts are considered in violation of state lottery laws and federal banking regulations, and PLS accounts are only available in a handful of states (see Chapter 4). In South Africa, where PLS accounts are quite popular, the government has tried to intervene and shut them down, questioning whether the accounts are used more as gambling accounts rather than savings accounts.

Regardless of where PLS accounts are offered, they generally appeal more to three specific populations: traditional nonsavers, those starting to save, and low-income families (as evidenced by usage trends in the UK, Mexico, Colombia, Venezuela, Argentina, Pakistan, Japan, and South Africa). Central to the debate of whether these are savings accounts or essentially a form of gambling, one must ask whether PLS accounts ultimately foster more savings.

While there's sufficient evidence to demonstrate the interest and uptake in PLS accounts through increased deposit gathering by participating financial institutions, it's unclear whether PLS accounts provide a net increase in overall savings. What's just as likely is that they simply shift savings from one financial institution to another—or one type of savings account to a PLS account—rather than truly increasing savings levels.

In markets where a clear link can be shown between the use of these accounts and increased savings levels, it's a financial innovation that warrants further use and customization.

The results, as evidenced by various research papers, have been mixed. Research by Tufano¹⁴ and by Guillen and Tschoegl¹⁵ indicates that PLS could have a beneficial impact on savings; as the above examples show, those benefits aren't universal.

From Traditional Banking to Mobile Banking

There is a huge divide in access to banking services between developed and developing countries: More than 3 billion people do not have access to banking services such as savings accounts.¹⁶ This gap exists because the cost of providing traditional banking services (i.e., through distributive branch networks and ATMs) far exceeds the value of deposits gathered by the world's poor, and because there is a high associated cost for the underserved to bank in traditional branch channels. Given the fragmented branch network, an individual may need to take upwards of half a day off work—often forgoing some wages—to get to their branch to make a deposit.

Attempts to leverage the traditional banking model have had their challenges. In 2005, the Financial Sector Charter applied regulatory pressure on South African banks to extend their banking services to the 18 million unbanked consumers in the country. The Mzansi account, a transaction account for low-income individuals, was launched to bring entry-level consumers into the banking sector. While almost 5 million Mzansi accounts were opened—representing 15% of the population—only 60% of the accounts were considered active. High levels of dormancy quickly occurred because it was counterproductive for customers to spend money and time traveling to a branch or ATM to make a deposit. In 2011, four of South Africa's banks reported losses on their Mzansi accounts.¹⁷

Fortunately, over the past 10 years a financial innovation has surfaced that addresses the high cost and low convenience of traditional banking services and provides more universal access to banking services: mobile banking. Unlike in developed countries with strong banking infrastructure where mobile banking is positioned as just another channel for banking services, in some parts of Africa and Asia, mobile banking was born out of necessity and may become the main channel for banking services for the underserved.

One of the most successful innovations linked to mobile banking is m-money. The most famous example is M-PESA (“M” for mobile; *pesa* is “money” in Swahili), which launched in Kenya in 2007. Three things drove the rapid adoption of M-PESA:

1. **High mobile phone penetration levels.** Over 50% of the population has cell phones, more than double the number of people with access to banking services. M-PESA leveraged existing mobile technology and was offered through a local cellular company, Safaricom, which counts 45% of the adult population as its customers.
2. **Preexisting retail stores to provide mobile payments.** There are 16,900 M-PESA stores and 100,000 airtime resellers in Kenya, which eclipses the 1,300 bank branches in the country.

3. **A large percentage of the Kenyan population needs to be able to remit/receive funds.**

As of 2013, M-PESA had 18 million registered customers, representing well over 50% of the adult population in Kenya.¹⁸

M-PESA's success comes not only from providing needed services, but from its non-banklike business model and being subject to fewer banking regulatory requirements than full-service financial institutions. Its origins are in the telecommunications industry, where the business model is based on usage revenue and prepaid revenues and each transaction (e.g., a call or text message) is profitable. With M-PESA, a customer is profitable as soon as they purchase a prepaid card (it doesn't matter if the customer uses the card a little or a lot). This is in contrast to the banking model whereby customers are deemed profitable or unprofitable based on their deposit balances and credit usage.¹⁹ M-PESA has also benefited from not being a financial institution. While it does need to deposit its customers' balances in a financial institution and is subject to the Central Bank of Kenya's regulations, part of M-PESA's success has been due to the Central Bank of Kenya's willingness to open up the regulatory environment to allow M-PESA to compete as an alternative to banks.

Japan's Jibun Bank

While developing countries have tended to use mobile banking channels out of necessity, Japan's mobile bank, Jibun, was launched to attract Gen Y consumers in the country. Created in 2008, Jibun is a joint venture between the Bank of Tokyo Mitsubishi and telecom operator KDDI. In 2013 Jibun had 1.5 million customers; 30% were in their 20s and 30% in their 30s, thus achieving its goal of attracting younger customers. Jibun is a truly full-service mobile bank offering with the benefit of a bank branch network. Jibun has a comprehensive mobile wallet (the Passbook) and also allows its customers to open accounts, pay bills, and send money transfers.

Assessing the Value of Mobile Banking

Since its debut in 2007 with a focus on person-to-person money transfer, M-PESA has transferred over US\$5.3 billion (B) in funds. In 2012, 60% of Kenya's GDP was transferred by M-PESA. M-PESA's product portfolio in Kenya has grown to include savings products, alliances with banks to offer insurance, credit products, and the ability to pay merchants via its mobile network.²⁰

M-PESA's disruptive innovation model provides access to banking services (payments in particular) by leveraging a ubiquitous cellular network and leapfrogging fragmented

banking distribution channels. Today M-PESA has extended to other markets facing similar challenges, including South Africa, Tanzania, Afghanistan, and India.

Thailand's TrueMoney

Thailand's version of m-money, TrueMoney, is a subsidiary of True Corporation (TrueCorp), a conglomerate with activities in mobile, pay TV, broadband, coffee shops, online gaming, and radio. TrueMoney was introduced to enable customers to pay their various TrueCorp bills more easily.

Because of TrueCorp's various services, TrueMoney can guarantee a certain volume of transactions and offer retailers confidential TrueMoney bill payment services. The TrueMoney eWallet can be topped up by a bank transfer from linked accounts at four different banks branches, ATMs, or scratch cards. Scratch cards are sold through the airtime reseller network of the company's mobile operator, TrueMove.

Crypto-Currencies: The Bitcoin

Launched in 2008, Bitcoin is a cryptography-based currency that uses open-source software, knows no international boundaries, is not regulated by any reserve bank or government, and is stored on the customer's computer drive instead of at a financial institution.²¹ Bitcoins are created (or "mined") by completing extremely complex mathematical equations that validate the bitcoin's code. Depending on the machine, it could take months to mine a single coin. Currently there are more than 12 million bitcoins in circulation, and the rate of new bitcoin production will be halved every four years until it reaches the maximum of 21 million bitcoins (based on an algorithm set when bitcoins were first created).

Avid users and supporters of Bitcoin have tended to be early adopters of technology, privacy and cryptography enthusiasts, those who mistrust the government, criminals, and speculators.²² Created as a digital currency primarily for making purchases on the Internet, the majority of Bitcoin payments have indeed been online, with only a handful of retail businesses accepting bitcoins. Despite its original goal to be an alternative digital payment, Bitcoin has recently been cast in a more dubious light, making headlines throughout 2013 over its speculative trading activities and the proliferation of bitcoin exchanges.

In March 2013, Bitcoin's trading activities began to take off when the government of Cyprus announced a "bail-in" for banks, which forced financial institutions to impose losses. Wanting to avoid personal forfeitures, people withdrew their funds, and many placed their money into Bitcoin. In the fall of 2013, interest in Bitcoin spiked in China, which

accounted for more than half of the world's bitcoin trade with prices above US\$1,000 and 100,000 coins being traded daily on BTC China, a bitcoin exchange.²³ Since then, bitcoin trading has cooled, and in April 2014 prices dropped to \$500 with 2,000 coins being traded daily on the BTC China exchange. This decline has been due in part to China's central bank's restrictions on the companies and intermediaries dealing in bitcoin exchanges.

In addition to fluctuations in the price of bitcoins, in February 2014 the largest bitcoin exchange, MtGox (based in Tokyo), lost at least \$400M in customer deposits—about 750,000 bitcoins—and filed for bankruptcy.

Assessing the Value of Bitcoin

Given the highly speculative nature of Bitcoin and the scrutiny by various government regulators, consumers will continue to be nervous about adopting this currency in the near future. Plus, the anonymous nature of using bitcoins for e-commerce transactions—which eliminates the need to provide credit card information—may not be a strong enough benefit to offset the fundamental issue of how the value of the bitcoin is set and the currency's instability. Until consumer demand, technological rigor, and the stability of the currency value are met, Bitcoin is not currently an example of a good innovation according to Litan's framework.

Structured Equity Products: Mini-Bonds

Up until the 1990s, investment portfolios were developed according to a narrow definition of what were considered high-quality debt and equity products. However, with the introduction of structured equity products (SEPs), a whole new world of derivative securities became available. According to the US Securities and Exchange Commission Rule 434, structured securities are “securities whose cash flow characteristics depend upon one or more indices or that have embedded forwards or options, or securities where an investor's investment return and the issuer's payment obligations are contingent on, or highly sensitive to changes in the value of underlying assets, indices, interest rates or cash flows.”²⁴ In other words, the payment features of a traditional security (such as a bond) are replaced with the performance (payoff) of an underlying asset. There are many different types of structured products that have underlying value linked to interest rates, foreign exchange rates, stock exchanges, and credit facilities.

While SEPs can enhance returns and reduce risk, depending on how the product is structured, the challenge of these innovations is that there is no uniform and transparent pricing approach. There is also the possibility that product investors don't understand the financial markets, which could cause them to assign incorrect probabilities or risks to

events. These factors make it difficult to compare the price of a SEP to a similar investment option and also open up the chance of investors overpaying for the product.²⁵

These challenges were all too evident during the 2008 financial crisis. In one example, SEP credit-linked notes, called mini-bonds, were issued by Lehman Brothers in Hong Kong (to 43,700 investors with HK\$20.23B) and Singapore (to 10,000 investors with SG\$500M). During a time of low interest rates on deposit accounts, savers lined up to buy mini-bonds, which typically promised a return of 5%, far higher than fixed deposit rates at the time. The products were marketed as “low risk” and of a “low investment threshold,”²⁶ and many customers thought they were getting something similar to a deposit, only with a higher yield (many had purchased the mini-bonds from their local bank branch).

What these consumers didn’t know was that these mini-bonds were anything but bonds: instead, they were credit derivative contracts whose underlying assets were specifically collateralized debt obligations (CDOs) created by Lehman Brothers and tied to the bank’s own creditworthiness. When Lehman Brothers went bankrupt in 2008, the contracts and mini-bonds became worthless.²⁷ In Hong Kong, a groundswell of angry investors managed to recover between 85% and 95% of their original investment a few years later when they protested against the neglect of the Hong Kong regulator and banks that offered these products.²⁸

Assessing the Value of Mini-Bonds

When the mini-bonds that were offered by Lehman Brothers are assessed against Litan’s three dimensions of financial innovations, it is clear that they failed on all fronts. Consumers were looking for ways to make some returns with their deposits, but the mini-bonds failed to give them better access or a convenient place to securely place their funds. The mini-bonds also failed from an economic perspective: Because they were tied to the performance of Lehman Brothers and CDOs, there was a negative impact when the company filed for bankruptcy.

Despite the negative experiences of Asian investors, mini-bonds continue to attract investors in other parts of the world, including Italy and the UK, where companies ranging from chocolatiers to hoteliers have issued mini-bonds in recent years.²⁹

Impact Investing

The term “impact investing” was first used by the Rockefeller Foundation to describe “capital that is placed outside of public equities markets and generates social and environment value in addition to financial return.”³⁰ The global assets under management in impact investing totaled about \$50B in 2010 and are expected to reach \$400B by 2020.³¹

Although impact investing has a core objective of delivering social good, it is not the same as socially responsible investing. Socially responsible investing screens investment portfolios for defined environmental, social, or governance requirements, while impact investing takes a more comprehensive approach to *solve* social and environmental problems by directing investments into private companies, projects, and funds while earning an attractive financial return.

While the impact investing market is relatively new, the sectors in which the investments are made have varying degrees of maturity. Some key sectors that have attracted impact investing include:

- Clean technology (e.g., green infrastructure, alternative energy, energy conservation).
- Community economic development (e.g., affordable housing, social enterprise).
- Microfinance (e.g., microlending to underserved populations).
- Social impact bonds (e.g., a blend of public and private investment to finance social activities).

Kenya's Kilimo Salama

Kilimo Salama was launched in 2009 to offer micro-insurance products to smallholder farmers. It protects farmers' investment in seed, fertilizer, and chemicals for various crops (e.g., maize, beans, sorghum, wheat, potatoes, millet, soybeans, and coffee) against extreme weather risk such as drought or excessive rainfall. By 2013, over 100,000 farmers were insured, and Kilimo Salama is now the largest agricultural insurance program in Africa. The service is an initiative of the Syngenta Foundation for Sustainable Agriculture in cooperation with Kenyan UAP Insurance.

Traditionally, insuring agricultural activities required costly onsite inspections of the losses sustained by farmers. Kilimo Salama replaced these expensive farm visits with measurements from solar-powered weather stations that indicate drought conditions. The weather stations measure the rainfall, and these measurements are compared with a predetermined agronomic model specifying crops' rainfall needs. If the predetermined needs are not met, all insured farmers in the vicinity of that station receive a payout.

In addition, Kilimo Salama has used mobile technology for automated premium collections and payouts to farmers. The farmer pays the cost of the insurance as a fee added to the original purchase of the seeds or fertilizer. A text message confirming the policy is then sent to the farmer's mobile phone. The policy is referenced to the farmer's nearest weather station, which transmits its data over the mobile network. All insurance payouts are processed using m-money.

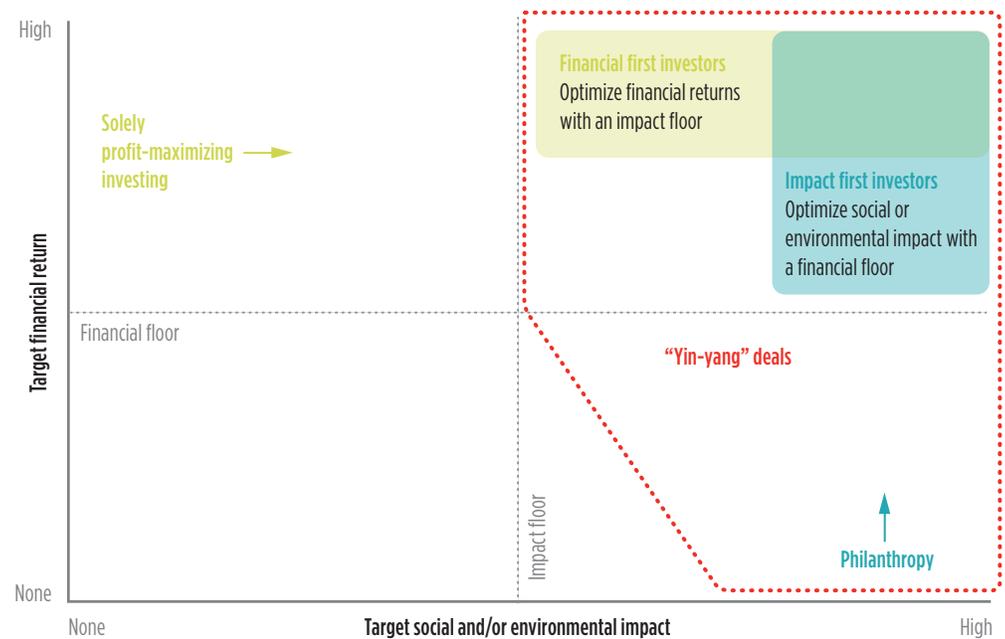
According to the Monitor Institute, there are two primary types of impact investors:

- ➔ **Impact first investors** target social or environmental good as their primary objective and are willing to accept a lower rate of return to achieve a social good, but their projects are not philanthropic endeavors. Examples of impact first investors include the Bill & Melinda Gates Foundation and the F. B. Heron Foundation, which both focus on community development and healthcare.
- ➔ **Financial first investors** prioritize the financial return while achieving social good. Financial first investors are typically commercial investors who seek out market rates of return while achieving some social or environmental good. They may do this by integrating social and environmental value drivers into investment decisions, by looking for returns in a way that leads them to create some social value (e.g., clean technology), or in response to regulations or tax policy (e.g., the Green Funds Scheme in the Netherlands).³²

While these types of investors will work separately on initiatives, they may also work together on “yin-yang” deals to focus on both the social impact and financial returns. Figure 7 illustrates the key segments of impact investors and where the optimization intersections can be found.

There are numerous examples of impact investing initiatives around the world. One is the International Finance Facility for Immunization. Launched in 2006, it raised \$4B in triple-A-rated bonds to provide vaccines to save 5 million lives over the next 10 years. The bonds, which were 1.75 times oversubscribed, were backed by eight donor countries and managed by Goldman Sachs and Deutsche Bank.

FIGURE 7
SEGMENTS OF IMPACT INVESTORS



Source: Jessica Freireich and Katherine Fulton, “Investing for Social and Environmental Impact: A Design for Catalyzing an Emerging Industry,” Monitor Institute, 2009.

Another example of impact investing is BRAC, a Bangladeshi nongovernmental organization (NGO) that uses enterprise-investment-driven approaches to serve the poor and has created almost 7 million jobs throughout Asia and Africa. Finally there is Grofin, an incubator of the Shell Foundation, which has demonstrated its commercial viability. It has more than \$100M invested in eight different funds, mostly in Africa.

Pakistan's First Women Bank

Established by former Pakistani Prime Minister Benazir Bhutto in 1989, the First Women Bank is both a scheduled commercial bank and a development financial institution that serves women entrepreneurs and advances socioeconomic empowerment.

It not only offers microfinance to women-owned small businesses but also serves small- and medium-sized enterprises and offers corporate finance.

Assessing the Value of Impact Investing

While impact investing is still in its early stages, it's shown a high likelihood of success and is largely recognized as an example of good financial innovation. Social planners realize that new solutions are needed to drive positive social and environmental change and see the potential of values-based investment; capital investors recognize the benefits of this category and are creating diversified investments likely to attract more values-based consumers.

But to ensure this success, there must be more stringent methods of calculating the financial returns on social good and large-scale programs that demonstrate a positive market return and attract necessary capital.

Recap of Global Financial Innovations

Figure 8 uses Litan's three dimensions of impact to determine the merits of the innovations described in this chapter and places them in the categories described in Chapter 2: the good, the bad, and the ugly. The good innovations demonstrated improved access and more convenience for end users with either a neutral or positive impact on the economy; the bad innovations were poorly designed from the start and did not have much positive impact on any of Litan's dimensions. Finally, the ugly represent those innovations that provided greater access and convenience but were misused, resulting in a negative economic impact.

FIGURE 8

RECAP OF GLOBAL FINANCIAL INNOVATIONS

Innovation	Good	Bad	Ugly
PLS accounts	<ul style="list-style-type: none"> • Provides more access and convenience as well as incentives to save • Neutral effect on economy (no evidence that aggregate savings increased or decreased) 		
Mzansi (low-income) transactional accounts		<ul style="list-style-type: none"> • Failed to improve access or convenience • Negative (limited) effect on economy as issuing banks reported losses on accounts 	
Mobile banking M-PESA	<ul style="list-style-type: none"> • Provides more access and convenience • Positive effect on economy/GDP 		
Crypto-currency Bitcoin			<ul style="list-style-type: none"> • Failed to improve access or convenience • Negative effect on economy as millions of dollars worth of bitcoins were lost by one exchange
Structured equity products (in general)		<ul style="list-style-type: none"> • Complexity of design and pricing negatively affects the fundamental value and benefit of these products to consumers and economy in general 	
Structured equity products: mini-bonds offered by Lehman Brothers			<ul style="list-style-type: none"> • Faced with a low interest-rate environment, individual investors were attracted to the higher returns of these so-called deposit products, not knowing the underlying value/payoff was linked to the creditworthiness of the issuer (Lehman Brothers) and CDOs
Impact investing	<ul style="list-style-type: none"> • Invests in companies and initiatives that drive social good; delivers a different kind of access and convenience to services (e.g., healthcare) beyond financial services • Deliberate and defined goal to create a positive financial return 		

Bangladesh's Grameen Bank Part 2

One of the earliest pioneers of impact investing, Grameen Bank has been the model of microfinance for the entire world. But as with all great innovations, as consumer needs change, so must the innovation.

In 2000, Grameen Bank conducted a four-year reassessment and redesign based on extensive client research. This process—referred to as “Grameen II”—was driven by the 1998 flood that left half of Bangladesh underwater. Grameen borrowers, like many other people, lost most of their possessions, including their houses.

The reassessment uncovered a key finding: The principles of Grameen’s original success—such as few loan defaults and full participation in group meetings—were being eroded.

As a result, Grameen II introduced more stringent loan repayment rules and moved away from group savings to individual savings—a change designed to determine the level of lending the individual should receive to best meet his or her needs. This individual accountability, combined with the social support of a group lending circle from the original model, has allowed consumers to continue to access much-needed financial services.

From Financial Innovations to Financial Innovators

Shifting from the financial innovations to the entities that create them, it’s helpful to keep in mind that institutions are not all alike; they are driven by different mandates. For instance, banks are financial intermediaries that are accountable for creating shareholder value, while credit unions and other mutually owned financial institutions are mandated to serve their members. The existence of these different end goals greatly influences the types of financial innovations that are introduced in the marketplace. In the next section, we look at the origins of credit unions and the unique approach they have to creating financial innovations and making a positive mark in the marketplace.

The Role of Cooperatives in Financial Services

Credit unions are a form of financial cooperative that had their start in 1864 when Friedrich Wilhelm Raiffeisen created the first credit union in Germany. Raiffeisen witnessed the struggles farmers faced with loan sharks and his solution was to establish the first cooperative lending institution, a credit union. Credit unions spread throughout Europe in the late nineteenth century, and in 1901, the first credit union was established in North America—a *caisse populaire* founded in Quebec by Alphonse Desjardins. Throughout the twentieth century, credit unions appeared all over the world.

Credit unions³³ differ from banks and other financial institutions in that those who have accounts in the credit union are its members and owners, each with an equal voice and vote regardless of the amount they have saved or invested. Unlike banks, which need to focus on shareholder profits, credit unions were established to serve people, not profit. Furthermore, the cooperative spirit is not limited to the membership base but also exists among the cooperative entities themselves. As the letter in Figure 9 from Edward Filene—an American businessman and philanthropist known for his pioneering role in creating credit unions in the United States—to Alphonse Desjardins illustrates, the collaborative spirit was, and still is, extremely important to credit unions and a critical avenue for innovation.

The willingness to share and collaborate among credit unions has allowed for a great number of financial innovations to flourish, particularly in Litan’s dimensions of access and convenience as described earlier. Figure 10 summarizes some of the key innovations introduced by credit unions in Canada and illustrates how the principles of cooperative collaboration and member focus help drive the positive contributions of greater financial access and convenience.

Financial Innovation and Cooperation

Throughout history, financial system leaders and policymakers have worked to create a strong foundation for a financial services system that serves both businesses and people. With the recent banking crisis, along with the entry of alternative players into the financial services realm, there’s been a growing awareness that cooperation, individual control, and “putting people before profits” can lead to both societal and individual financial well-being. Recent examples of this include microfinancing—where the focus is on supporting individuals to help them repay their small loans on time and in full rather than managing the interest rate—and leveraging technology to support a wide variety of endeavors, such as kiva.org, kickstarter.com, and M-PESA.

FIGURE 9

SPRIT OF COOPERATIVE COLLABORATION, 1915

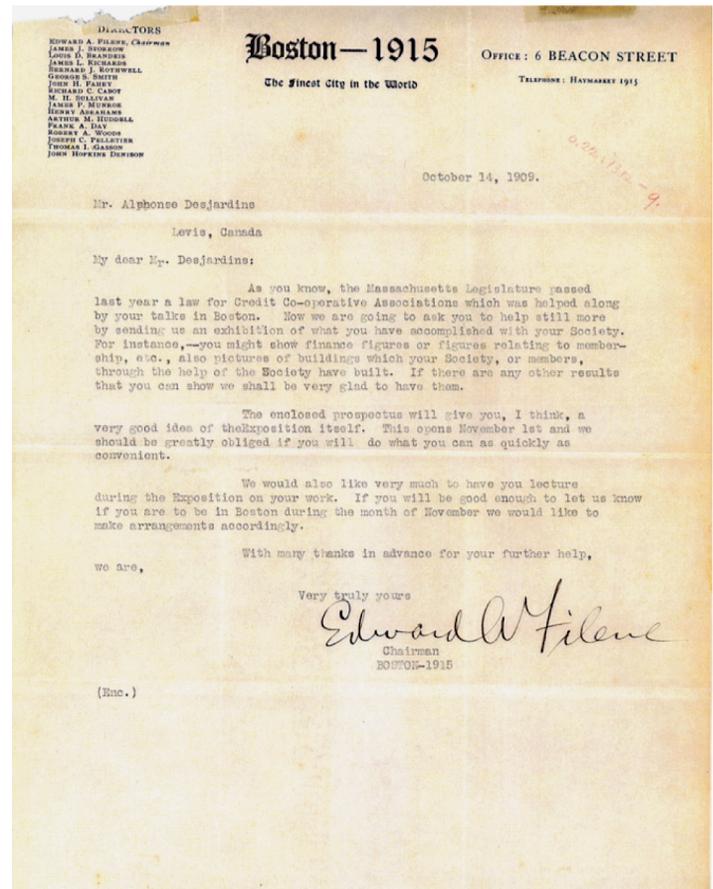


FIGURE 10

CREDIT UNION INNOVATIONS IN THE 20TH CENTURY: A CANADIAN PERSPECTIVE

Innovation	Credit union principle		Type of positive impact	
	Collaboratively based	Member focused	Greater access	Greater convenience
1900 Desjardins’s first caisse populaire opens its doors	★	★	★	★
1901 Desjardins is the first to introduce personal loans based on borrower’s personal character		★	★	★
1933 CS Co-op is the first financial institution in Canada to introduce payroll deductions for deposits and loan payments		★	★	★
1961 VanCity is the first financial institution to offer loans to women in their names	★	★	★	★
1976 CS Co-op is the first to offer personal lines of credit		★	★	★
1977 Sherwood Credit Union introduces the first full-service ATM network in Canada		★	★	★
1986 Debut of Ethical Mutual Funds		★	★	★
1996 First PC-based banking (no branches) launched by Citizen’s Bank (owned by VanCity)		★	★	★

Source: World Council of Credit Unions, “‘Credit Union Firsts’ Commemorate a Strong History of Innovation,” March 31, 2004, www.woccu.org/newsroom/releases/Credit_Union_Firsts_commemorate_a_strong_history_of_innovation.

But these examples are merely the tip of the consumer-led iceberg of financial innovations. By continuing to place the focus on the consumer and bolstering the collaborative DNA of cooperatives, credit unions have the opportunity to disrupt the financial services industry through radical innovations for years to come. There are 55,000 credit unions across 100 countries, managing \$1.3 trillion in deposits and \$1.1 trillion in loans and giving 200 million members access to financial services.³⁴ Clearly, credit unions have the resources and the mandate to drive meaningful innovation around the world.

The Filene Method: Delivering Financial Innovation

As the financial services industry grows more complex and new competitors enter the marketplace, the need for innovative products, processes, and business models is more critical than ever to help ensure organizational success. Yet, many financial institutions have not had the benefit of a proven, repeatable process for innovation. Many organizations approach innovation in a haphazard way, which can lead to inefficient use of resources, missed deadlines, and ineffective solutions—all of which increase development costs and prevent innovations from successfully launching into the marketplace. In response to the need for a more effective and repeatable approach, the Filene Method was created to support financial innovations among credit unions in North America.

Developed by the Filene Research Institute as part of its i^3 program, this approach has been refined over the past decade with input from both industry and academia. The Filene Method of innovation is practiced by credit union executives (i^3 ers) and provides financial institutions with a framework to develop solutions to the most pressing consumer financial challenges. The focus of the Filene Method is on developing and testing innovative solutions rather than on market commercialization. The innovation process is divided into six distinct phases, as illustrated in Figure 11.

Over 150 concepts have been developed during the past 10 years using the Filene Method. Although the problems being addressed and the solutions being conceived vary widely in scope and subject, their development has followed the same prescribed methodology with favorable results.

FIGURE 11

THE FILENE METHOD OF INNOVATION



It Starts with Desirability

A central tenet of the Filene Method is the notion of human-centered design (HCD). This approach to design was developed by IDEO, which is well regarded as the premier global industrial design firm with successful innovations that span multiple industries. The process emphasizes that all innovations must be rooted in directly solving the needs of an end user. The idea must be desirable to the ultimate user, or it will never succeed. A solution that doesn't properly address a human-centered problem is not truly an innovation.

Once desirability has been established, the HCD process requires the concept to be both feasible and viable. It is this trifecta of desirability, feasibility, and viability that defines a concept developed using the HCD methodology (Figure 12). Feasibility is assessed from both a technical and organizational perspective. Can the idea realistically be implemented given the organization's systems, procedures, people, or third-party partnerships? Will the idea support the organization's goals and be in direct alignment with its mission and vision? Viability is achieved when the concept supports the organization's financial goals, namely through an effective business model. If the concept is implemented, will sufficient revenue be generated or expenses be mitigated to justify an investment in the idea?

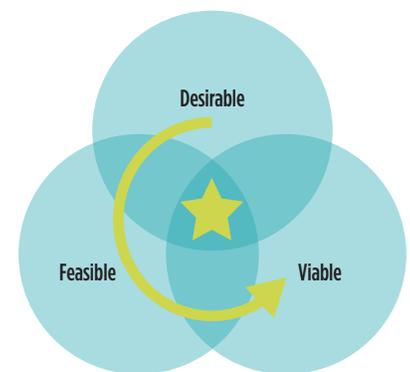
The HCD concept plays a central role in the execution of the Filene Method, as innovators move from identifying problems that end users face to building innovative solutions that meet their needs in desirable, feasible, and viable ways. Each of the underlying steps and exercises within the Filene Method are designed to address the intersection of these HCD criteria, ultimately leading to a tested prototype that proves or disproves the hypothesis associated with the innovative solution.

Insights

The first step in the Filene Method is the identification of insights, with a goal of using a variety of data to establish a clear problem to solve for a specific group of people. Inspiration for these insights can come from a number of sources—interviews with members or ethnographic research, discussions with industry collaborators, academic journals and articles, the popular press, and unrelated industries, to name a few.

FIGURE 12

**HUMAN-CENTERED DESIGN:
INTERSECTION OF DESIRABILITY,
FEASIBILITY, AND VIABILITY**



Source: Adapted from IDEO, *Human Centered Design Toolkit*, Version 2.

Filene Method in Action: Insights Phase

In 2013, a Filene i³ team gathered a series of insights based on the popularity of wearable technology and devices such as the Jawbone UP that provide users with timely feedback on how they live and act. Combined with a realization that many consumers regret purchases after they have been made, the team developed **Centsus**—an app that lets consumers track emotions driven by spending habits and subsequently sends alerts prompting users to think twice before similar spending occurs.



A key to success during the insights phase is to approach the assessment of gathered data from the perspective of a beginner—without applying frames, assumptions, or biases too soon in the innovation process. The art and science of assembling insights from data requires the discipline to not move too quickly into developing solutions; rather, at this point the innovator must look for patterns in various data that collectively indicate a definite problem that needs to be solved.

Assembling a list of insights is only half of the work in this phase; in order for an innovation team to be truly successful, they must select one or more insights that are interesting and compelling to them. The work of innovation is not easy, and innovators must be personally interested in the patterns and problems generated during the insights phase in order for the Filene Method to be truly useful.

This set of insights can then be used to generate a problem statement, which often takes the form of a question (i.e., “How might we help encourage families to develop different savings habits?” or “How might we devise a more efficient process for credit unions to onboard members located far from branches?”). This problem statement becomes the core of the resulting innovation process, with a goal of solving the problem in a way that is desirable, feasible, and viable.

Ethnographic Research: Observing the Natural Environment

A popular technique that financial innovators use to learn more about the challenges of their customers or members is rooted in anthropology and sociology. The ethnographic method involves the study of behaviors and actions in the setting where they traditionally occur. It allows researchers to operate from a position of trust and makes it easier for study participants to give natural, uncensored feedback.

Filene has used ethnographic research to help build observations for several studies. During the development of *The Culture of Borrowing and Debt: An Ethnographic Approach*,³⁵

researchers went into the homes of 22 consumers to view the results of spending and saving behaviors firsthand and see the contents of participants' wallets and pocketbooks. While conducting research for *Why Choose a Credit Union? An Ethnographic Study of Member Behaviors*,³⁶ researchers went into credit union branches to observe how employees interacted with members and to interview various levels of credit union employees in their natural environments. Both examples yielded observations that wouldn't have been possible with traditional surveys or post-experience feedback.

Ideation

After insights have been collected and a problem statement has been agreed upon, it's time to come up with possible solutions. Here, again, the sources of inspiration for ideas can come from anywhere. The ideation phase is often the most ambiguous and fluid, as ideas often come spontaneously or seemingly from out of nowhere.

However, there are brainstorming techniques and tools that can be used to help innovators generate ideas to solve problems. Changing venues or work locations is a good first step. This variety in environment and stimuli often leads to creative inspiration that does not happen in the usual office or conference room.

Filene Method in Action: Ideation Phase

The in-home party business model has thrived in the United States and other countries for decades. Tupperware and Pampered Chef are examples of successful businesses that leverage a party host's network of friends and family members for sales opportunities. This concept served as the inspiration for a Filene i³ team's idea, called **Moneyworks**. Credit union advocates host parties in their homes where friends and family hear about how a credit union can address their financial needs and optimally choose to become members themselves.

The logo for Moneyworks, featuring the word "MONEYWORKS" in a green, sans-serif font.

Once a suitable location has been found, a number of ideation techniques can be employed to generate a large quantity of ideas. At this point the quantity versus the quality of the ideas is key. Look to unrelated stimuli—random items or people such as a cartoon character, a home improvement tool, or an electronic gadget—for approaching ideas from a different point of view. Think of unrelated industries and ways firms in those industries have innovated for possible application to financial services problems. Break away from established rules and laws, suspend judgment, and consider how a problem might be solved if those rules weren't in place.

Through this process of generating a large volume of ideas, a few concepts will stand out as particularly interesting, groundbreaking, or relevant. It is at this point that the ideation process turns from quantity to quality and a particularly innovative solution often magically presents itself. Once again, ideation is more art than science.

Fact Check

After a problem statement has been crafted and a particularly interesting idea has appeared, it's time to pair the idea up with the realities of the world. How meaningful and beneficial is this idea to the end user? How exciting is the idea? Is it truly a groundbreaking innovation or simply a refresh of something already on the market? This is the fact check phase of the Filene Method.

An idea isn't going to succeed if the innovation team doesn't love it. Teams can determine where they stand by assessing in a quantitative way how excited they are about the concept. This can be accomplished simply with a team asking themselves how exciting and viable the concept is on a scale of 1 to 5. If the answer indicates that the team is excited about the idea, the concept passes what is called the "gut check."

But passion alone does not make an idea feasible. At this point in the innovation process, teams must take an objective look at the marketplace to answer several questions:

- Do other similar solutions exist?
- Do a sufficient number of consumers or firms experience the problem?
- Will members be excited about the solution?
- Are there legal or regulatory issues that stand in the way of implementing the idea?
- Does it appear that a viable business model can be created?
- What unknowns still need to be researched?

Stepping back to answer these questions—to evaluate whether significant "death threats" exist that could delay or prevent your idea from moving forward—is a valuable exercise to determine whether or not you want to pursue your idea.

At this point, some unique ideas will meet their demise because they do not pass the fact check and feasibility test. Innovation teams may need to revisit other concepts generated during the ideation phase to identify another that is more feasible. However, once a concept passes the fact check, the fun of building a prototype begins.

Filene Method in Action: Fact Check Phase

A 2012 Consumers Union report revealed that while nearly one in five Americans wanted to switch financial institutions, 59% of big bank customers felt it was “too much of a hassle” to make the switch.³⁷



One i³ team chose to tackle this problem in early 2014 and developed a concept called **Switch Ninja**, which aims to remove the complexity of switching to a credit union by automating the transfer of information and communicating with members throughout the process.

As part of the team’s fact check work, they discovered vendors that had previously attempted to solve the switching problem, few with significant success. They identified key points of differentiation between these solutions and Switch Ninja and focused their concept development on the differentiated features. They also reviewed patent data and determined that while the intellectual property of other processes was registered, the functionality employed by Switch Ninja did not appear to be patented. Based on these fact check results and the team’s shared passion for the concept, they proceeded from fact check into prototyping.

Prototyping and Implementation

The prototyping and implementation phase of the Filene Method is where a concept is brought to life. It is often the most difficult phase because it requires innovators at financial institutions to identify the resources needed to build what is known as a minimum viable product, or a working model of the idea that has the essential features needed to get key feedback and observations from the pilot group. The goal of prototyping is to share the concept with a small and strategically important audience in a tangible way, as quickly and cheaply as possible. Optimally, the prototype should capture and convey what is meaningful and unique about the idea.

During the prototyping phase, it can be tempting to focus on developing what is known as a “100% solution,” or the final working product. But spending the time, resources, and energy to fully build a product at this point is not an efficient endeavor. Instead, a prototype is useful for communicating the essence of a product or service to the anticipated end user without devoting significant resources. Prototypes take many forms. For a financial product, it may mean a set of manual processes that let a pilot group understand how the final product will perform. If the concept is a website or mobile phone application, a prototype may simply be a set of static screen shots or a limited-functionality online experience. For concepts that are eventually commercialized, the final product may not look anything like the prototype.

Filene Method in Action: Prototyping Phase

Developing a prototype for a mobile phone application isn't always feasible depending on the expertise and resources available to innovators. One Filene i³ team used a low-tech but effective tool—laminated flashcards on a ring—to demonstrate what screen images would look like for their mobile phone app, now called **Mintuition**, that helps students evaluate the financial impacts of different education and career choices.



Testing and Iteration

Once a prototype has been built, it is critical for the concept to be tested in the real world. Here, a hypothesis is developed so a theory can be validated. For example, if an innovation has been developed to make the checking account switching process easier, the hypothesis might be “If members use this new switching product, they will be more likely to fully use their credit union as their primary financial institution and to have 100% of their transactional relationship moved to the credit union within two weeks.”

Testing of the prototype and its correspondent hypothesis will indicate whether or not the concept is solving the identified problem as originally anticipated. Many times, modifications to the concept will be necessary based on the test results, and a redesigned prototype may be developed and again tested. Here, the goal is to arrive at a prototype and hypothesis that is proved through the testing that has been conducted. Once the test has been successfully completed, it is time to report on the results of the innovation process.

Filene Method in Action: Testing Phase

Consumers know they need financial advice, but many who are burdened by debt or constrained by the impact of bad financial decisions are embarrassed to seek face-to-face help. In 2009, a Filene i³ team developed **Debt in Focus**, a website that offered a way to deliver debt reduction advice anonymously to consumers. After cycles of pilot testing and refinement, the concept has been commercialized (now called SavvyMoney) and is used at credit unions around the United States to help members get out of debt. One of the reasons for this product's success was the extensive testing and version iterations. In 2010, almost 250 US credit unions tested this product on their websites, generating over 300,000 consumer interactions. The resulting data helped inform the successful product development cycle that turned the innovative product into a useful tool for consumers and financial institutions alike.



Reporting

The final step in the Filene Method is one of the most important in the innovation process. Here, innovators at financial services firms need to communicate their concept, its impact, and the prototype test results to strategically important stakeholders (such as financial institution executives, third-party vendors, or capital investors) that will optimally make a decision to move forward with the concept or invest in the idea. An evidence-based approach to reporting the problem being addressed, the idea that has been developed, and the results of testing the prototype is most effective in generating interest in the commercialization of an idea.

Credit unions have limited resources and are faced with a number of competing options. In the reporting phase, innovators must deliver a concise and compelling story that convinces decision makers that they should allocate resources to the concept being presented. In addition to facts, figures, and evidence, a compelling “elevator pitch” that gets the concept’s central message across in a memorable way is often the icing on the cake, convincing decision makers to move forward with commercializing an innovation.

No concept is a “slam dunk,” regardless of how diligent innovators are about following a prescribed path of innovation such as the Filene Method. But certainly this methodology of identifying insights based on needs that are faced by end users and designing a thoroughly vetted, well-tested innovation around those needs has proven over the years to be a recipe for greater success. A case study of an innovation that was developed using the Filene

Method follows. While not all stages are mentioned in this case study, the resulting innovation benefited from application of the Filene Method.

Filene Method in Action: Reporting Phase

Most credit unions realize the expense involved in printing, storing, and revising paper brochures. But even the most obvious of problems needs an effectively communicated solution. When a 2012 Filene i³ team developed eBrochure (now known as **Leeflet**), a customizable electronic brochure that replaces paper, they didn't simply assume their audience would see the benefit of their concept. They developed a series of evidence-based reports and presentations that communicated the idea's benefits and summarized the quantifiable impacts of their pilot test. Now Leeflet is commercially available to credit unions.



The Filene Method in Action

In an earlier chapter, the evolution of prize-linked savings (PLS) accounts around the world was presented. It is instructive to examine the journey this idea took from the UK, Asia, and Latin America to US credit unions in the form of the innovation Save to Win.

Harnessing a wealth of insights from around the world, the i³'ers explored the idea of bringing PLS to North America.³⁸ First, they gathered insights by connecting with Professor Peter Tufano to gain a better understanding of this "old" innovation. They discovered that PLS is an effective tool to help consumers with little or no previous savings get in the habit of putting money away and have fun at the same time. Americans have a long-running habit of playing the lottery, with a majority of the adult population having played the lottery at least once in their life.³⁹

Initial research indicated a tremendous amount of promise for PLS in the United States, especially considering the poor savings habits of US consumers. The initial research, however, indicated that PLS was unlikely to be feasible because the regulatory environment in the United States prohibits PLS as it is practiced across the globe. This initial dead end was overcome when the team partnered with a nonprofit organization called Doorways to Dreams (D2D) to examine potential ways to test the product. Through deep research and keen legal analysis, the team discovered a wrinkle in the state of Michigan's law that allowed for credit unions to offer "savings promotion raffles."

PLS was launched as Save to Win (S2W) in 2009 as a pilot program with eight Michigan credit unions. S2W offered credit union members a simple but compelling proposition: For every \$25 deposited, they earned a chance to win both a \$100,000 grand prize jackpot and a host of smaller monthly prizes. The first-year results were impressive with over 11,000 new accounts and over \$8.5M in new savings (Figure 13).

Even more impressive was the type of saver S2W attracted: new savers who were of modest means and asset poor (Figure 14).

In an incredible stroke of luck, the winner of the \$100,000 grand prize in S2W's first year was an elderly credit union member of modest means. This individual became S2W's poster child, and as a result, credit unions and policymakers took notice.

In the intervening years, S2W has expanded dramatically in Michigan, with recent numbers indicated in Figure 15.

These total numbers hide some impressive descriptive details about who these consumers are—primarily consumers who did not have savings prior to participating in S2W (Figure 16).

As a result of the success in Michigan, several other US states pushed for legislation to allow similar accounts (see sidebar on page 42).

Figure 17 provides examples of active S2W programs across the United States; each year more states add the program.

FIGURE 13

SAVE TO WIN RESULTS (DECEMBER 31, 2009)

Credit union	Active certificates	Penetration of 12/31/2008 member base (%)	Savings (\$)	Average account size (\$)
CACU	1,078	14.9	306,385.95	284.22
CFCU	1,962	5.7	1,639,631.77	835.69
CMCCU	1,403	8.1	1,726,104.09	1,230.32
E&A	836	2.6	595,364.24	712.16
ELGA	1,481	3.8	815,079.53	550.36
Frankenmuth	989	4.6	750,700.60	759.05
NuUnion	1,455	1.6	1,391,318.25	956.23
Option 1	2,462	7.3	1,335,762.13	542.55
	11,666	4.3	8,560,382.56	733.79

Source: Doorways to Dreams.

FIGURE 14

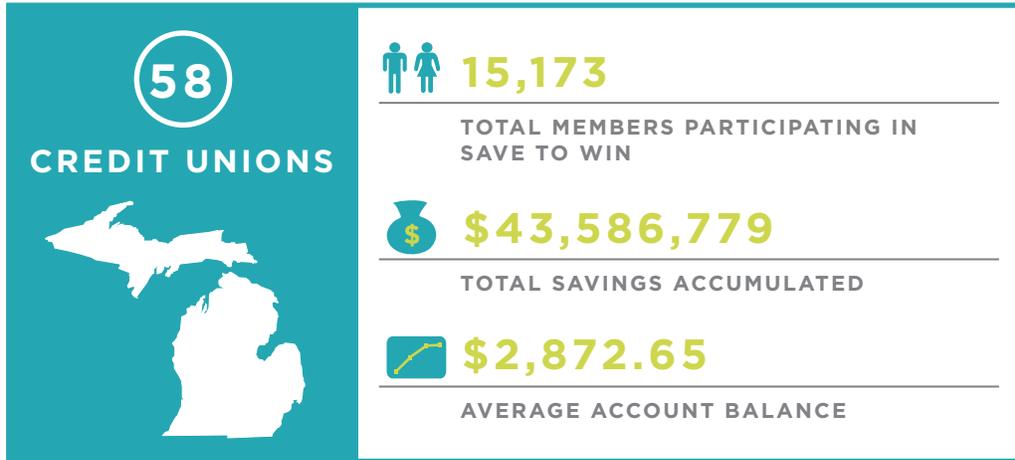
PERCENTAGE OF NONSAVERS, ASSET POOR, AND LOW TO MODERATE INCOME (LMI)

Credit union	Nonsavers (%)	Asset poor (%)	LMI (%)
CACU	67	67	62
CFCU	54	29	43
CMCCU	53	27	36
E&A	62	38	49
ELGA	56	46	46
Frankenmuth	52	33	40
NuUnion	48	31	36
Option 1	54	34	40

Source: Doorways to Dreams.

FIGURE 15

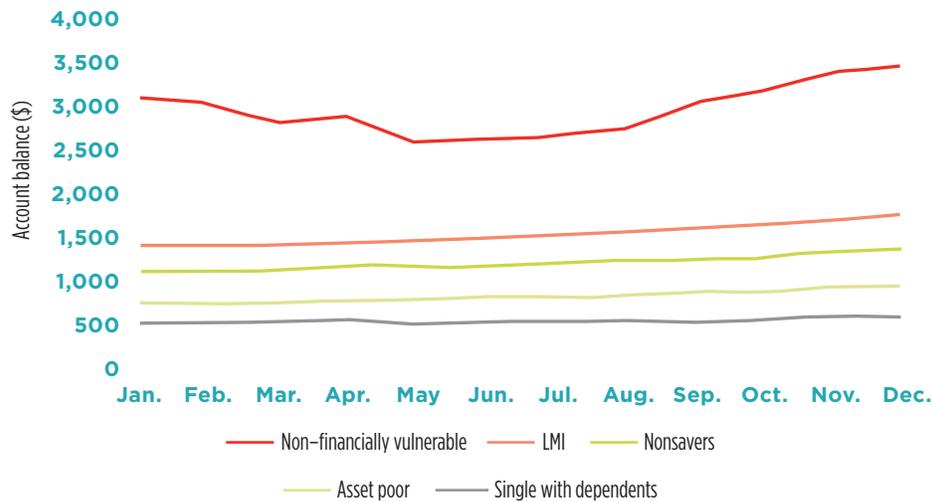
S2W RESULTS IN MICHIGAN, 2012 YEAR-END



Source: Doorways to Dreams.

FIGURE 16

AVERAGE S2W ACCOUNT BALANCES, 2012



Source: Doorways to Dreams.

Save to Win Legislative Success

As a result of the success in Michigan, states throughout the country are interested in amending their laws to allow financial institutions to offer raffle-based PLS products. Below are the states that have passed explicit savings promotion raffle laws.

- **Indiana (2014) legislation HEA1235.** Amended banking laws to allow credit unions and banks to offer savings promotion raffles.
- **Connecticut (2013) legislation: HB 5564.** Amended banking laws to allow credit unions and community banks to offer savings promotion raffles.
- **New York (2013) legislation: S 5145.** Amended banking laws to allow credit unions to offer savings promotion raffles. In partnership with the National Federation of Community Development Credit Unions and the Credit Union Association of New York.
- **Maryland (2012) legislation: HB 786.** Amended commercial and lottery law to allow credit unions and depository institutions to offer savings promotion raffles. In partnership with Maryland CASH Campaign.
- **Nebraska (2011) legislation: LB 524.** Amended gambling law to allow credit unions to offer savings promotion raffles. In partnership with Financial Hope Collaborative and Nebraska Credit Union League.
- **North Carolina (2011) legislation: SB 513.** Amended credit union laws to allow savings promotion raffles. In partnership with the North Carolina Credit Union League.
- **Washington (2011) legislation: SB 5232.** Amended gambling and banking law to allow financial institutions to offer chance-based products. In partnership with the Washington Asset Building Coalition and the Northwest Credit Union Association.
- **Maine (2010) legislation: SP 0645.** Amended gambling and banking law to allow credit unions to offer savings promotion raffles.
- **Rhode Island (2010) legislation: S 2399.** Amended credit union and lottery laws to allow credit unions to offer savings promotion raffles. In partnership with Credit Union Association of Rhode Island.
- Additionally, in 2013 a bipartisan group of US senators introduced the American Savings Promotion Act, which would permit the creation of PLS accounts on a federal basis.

Source: *Doorways to Dreams*.

In summary, S2W represents a classic “good innovation.” S2W is good for:

- Consumers, because they put savings in a financial institution.
- Financial institutions, because they attract deposits and ancillary business from a consumer segment they had previously not reached well.
- Policymakers, because stable savings mobilization is an overarching goal of all modern economies.

FIGURE 17

ACTIVE S2W PROGRAMS

	Michigan	Nebraska	North Carolina	Washington
Launch year	2009	2012	2013	2013
Number of credit unions participating	38	11	7	6
Grand prize	\$60,000 6 winners	\$25,000 1 winner	\$30,000 1 winner	1 \$5,000 grand prize 3 \$5,000 monthly prizes 4 winners total
League prizes	\$2,500–\$3,750 monthly 50–75 winners	\$1,500 monthly 15–30 winners	\$1,000 monthly \$1,000–\$5,000 quarterly 12 monthly winners 3 quarterly winners	Increasing from \$250 to \$1,000 Increasing from 5 to 20 winners

Source: Doorways to Dreams.

CHAPTER 5

Conclusions and Recommendations

In this report we’ve taken a brief look at innovation—starting with general innovations throughout history and moving more specifically into financial innovations, especially those of the recent past. We discussed the areas of opportunity that tend to drive innovation as captured by Peter Drucker, and the six main functions of financial services according to Robert C. Merton. Throughout the report we’ve stressed that the true test of an innovation’s value should be this: Did it benefit society?

In looking at the value of financial innovations of the last half century, it’s obvious that they’ve been a decidedly mixed bag. Some have met the litmus test of societal benefit, while others, sadly, have fallen short.

As the world becomes a more technology-driven place, the opportunity for innovation is growing, and the landscape of the financial services marketplace is going through radical shifts in emerging technologies and consumer demands. Alternative players abound—technology companies, traditional telecommunications companies building out mobile banking offerings, and consumers bypassing traditional financial intermediaries to lend peer-to-peer.

What does this mean for traditional financial institutions, especially consumer-centric ones like credit unions? How can the principles of cooperatives be leveraged during this dynamic time? Where does financial innovation go from here? What is the road map that will take us into the future?

We believe that innovation is critical to the credit union future but that innovations can only earn the label of “successful” if they put people before profits. As innovations such as mobile banking, PLS, and others discussed in this report prove, this type of innovation is alive and well. We’re hopeful that these examples, plus the Filene Method shared in this report, will give credit unions the incentive—and the tools—they need to embrace meaningful innovation for themselves and the people they serve.

Endnotes

¹ Joseph E. Stiglitz, “The Innovation Enigma,” Project Syndicate, March 9, 2014, www.project-syndicate.org/commentary/joseph-e--stiglitz-argues-that-the-impact-of-technological-change-on-living-standards-has-become-increasingly-unclear.

² P. Frankelius, “Questioning Two Myths in Innovation Literature,” *Journal of High Technology Management Research* 20, no. 1 (2009): 40–51.

³ Joseph Schumpeter, *Capitalism, Socialism, and Democracy* (New York: Harper & Brothers, 1942).

⁴ Ibid.

⁵ Robert C. Merton, “A Functional Perspective on Financial Intermediation,” *Financial Management* 24 (Summer 1995): 23–41.

⁶ Peter Tufano, “Financial Innovation,” in *Handbook of the Economics of Finance*, Vol. 1A, ed. G. M. Constantinides, M. Harris, and R. M. Stulz (Amsterdam: Elsevier, 2003), 307–35.

⁷ Peter Tufano, Andrea Ryan, and Gunnar Trumbull, “A Brief Postwar History of US Consumer Finance,” *Business History Review* 85, no. 3 (2011): 461–98.

⁸ Robert E. Litan, *In Defense of Much, But Not All, Financial Innovation* (Washington, DC: Brookings Institution, 2010), www.brookings.edu/research/papers/2010/02/17-financial-innovation-litan.

⁹ FINRA Investor Education Foundation, National Financial Capability Study, “U.S. Survey Data at a Glance,” www.usfinancialcapability.org/results.php?region=US.

¹⁰ Statistics Canada, “Study: Household Debt in Canada,” March 23, 2012, www.statcan.gc.ca/daily-quotidien/120323/dq120323b-eng.htm.

¹¹ Litan, *In Defense of Much, But Not All, Financial Innovation*.

¹² Ibid.

- ¹³ Peter Tufano, “Saving whilst Gambling: An Empirical Analysis of UK Premium Bonds,” *American Economic Review* 98, no. 2 (2008): 321–26.
- ¹⁴ Ibid.
- ¹⁵ Mauro F. Guillen and Adriane E. Tschoegl, “Banking on Gambling: Banks and Lottery-Linked Deposit Accounts,” *Journal of Financial Services Research* 12, no. 3 (2002): 219–311.
- ¹⁶ Ignacio Mas, “Low Cost Banking: How Retail Stores and Mobile Phones Can Transform Access to Finance,” World Bank *All About Finance* blog, August 20, 2010.
- ¹⁷ Tashima Ismail and Khumbula Masinge, “Mobile Banking: Innovation for the Poor,” Gordon School of Business Science, University of Pretoria, May 2011, blogs.worldbank.org/allaboutfinance/low-cost-banking-how-retail-stores-and-mobile-phones-can-transform-access-to-finance.
- ¹⁸ Safaricom, “H1 FY14 Presentation,” 2013, www.safaricom.co.ke/images/Downloads/Resources_Downloads/Half_Year_2013-2014_Results_Presentation.pdf.
- ¹⁹ Ignacio Mas and Daniel Radcliffe, “Mobile Payments Go Viral: M-PESA in Kenya,” *Capco Institute’s Journal of Financial Transformation* 32 (August 2011): 169
- ²⁰ Sonja Oestmann, Steve Esselaar, and Andy Dymond, “Connecting BoP: A Guide to Leveraging ICT for Business Inclusion,” Intelecon Research for BMZ, Federal Ministry for Economic Cooperation and Development (Germany), 2013.
- ²¹ Andy Greenberg, “Crypto-Currency,” *Forbes*, April 20, 2011, www.forbes.com/forbes/2011/0509/technology-psilocybin-bitcoins-gavin-andresen-crypto-currency.html.
- ²² Reuben Grinberg, “Bitcoin: An Innovative Alternative Digital Currency,” *Hastings Science and Technology Law Journal* 4, no. 1 (2012): 159–208.
- ²³ “Bitcoin in China: A Dream Dispelled,” *The Economist*, April 12, 2014, www.economist.com/news/finance-and-economics/21600736-chinese-regulators-make-life-hard-crypto-currencies-dream-dispelled.

- ²⁴ US Securities and Exchange Commission, “Staff Summary Report on Issues Identified in Examinations of Certain Structured Securities Products Sold to Retail Investors,” 2011, www.sec.gov/news/studies/2011/ssp-study.pdf.
- ²⁵ Ibid.
- ²⁶ Leanne Wang, “Lehman Brothers’ Minibonds Teach Hong Kong Investors a Big Lesson,” *ChinaStakes*, September 29, 2008, www.chinastakes.com/2008/9/lehman-brothers-minibonds-teach-hong-kong-investors-a-big-lesson.html.
- ²⁷ Tom Holland, “Five Years Later, What Has the Mini-Bond Scandal Taught Us?” *South China Morning Post*, September 18, 2013, www.scmp.com/business/article/1311841/five-years-later-what-has-mini-bond-scandal-taught-us.
- ²⁸ “Lehman’s Mini-Bonds: The Good Inside the Bad,” *The Economist*, March 31, 2011, www.economist.com/node/18486397.
- ²⁹ “Pros and Cons of Mini-Bonds: What the Experts Think,” *The Week*, May 24, 2013, www.theweek.co.uk/prosper/53225/pros-and-cons-mini-bonds-what-experts-think.
- ³⁰ Phillips, Hager & North Investment Management, “An Overview of Impact Investing,” November 2010, www.phn.com/portals/o/pdfs/Articles/Overview%20of%20Impact%20Investing.pdf.
- ³¹ TD Bank Group, “The Landscape for Social Impact Investing—A White Paper,” 2012, www.td.com/document/PDF/corporateresponsibility/publications/The-Landscape-for-Social-Impact-Investing-a-White-Paper-Links.pdf.
- ³² Jessica Freireich and Katherine Fulton, “Investing for Social and Environmental Impact: A Design for Catalyzing an Emerging Industry,” Monitor Institute, 2009.
- ³³ Credit unions and cooperatively owned banks are referred to as credit unions throughout this report.
- ³⁴ World Council of Credit Unions, “‘Credit Union Firsts’ Commemorate a Strong History of Innovation,” March 31, 2004, www.woccu.org/newsroom/releases/Credit_Union_Firsts_commemorate_a_strong_history_of_innovation.

³⁵ Robbie Blinkoff and Tracy Pilar Johnson, “The Culture of Borrowing and Debt: An Ethnographic Approach” (Madison, WI: Filene Research Institute, 2012), filene.org/research/report/Culture_Borrowing.

³⁶ Stefanie Norvaisas and J. Edward Russo, “Why Choose a Credit Union? An Ethnographic Study of Member Behaviors” (Madison, WI: Filene Research Institute, 2007), filene.org/research/report/why-chose-a-credit-union-an-ethnographic-study-of-member-behaviors.

³⁷ Consumers Union, “Trapped at the Bank: Removing Obstacles to Consumer Choice in Banking,” May 29, 2012, defendyourdollars.org/wordpress/wp-content/uploads/2012/05/TrappedAtTheBank-Complete.pdf.

³⁸ For a full description of their work, visit filene.org/research/i3-project/prize-linked-savings-accounts.

³⁹ National Association of State and Provincial Lotteries, “Did You Know,” www.naspl.org/index.cfm?fuseaction=content&menuid=14&pageid=1020.

List of Figures

- 6 **FIGURE 1**
OPTICAL ILLUSIONS: RUBIN VASE BY EDGAR RUBIN AND RABBIT AND DUCK BY LUDWIG WITTGENSTEIN
- 7 **FIGURE 2**
THE FOUR MAIN CATEGORIES OF INNOVATION
- 8 **FIGURE 3**
DRUCKER'S SEVEN AREAS OF OPPORTUNITY FOR BUSINESS INNOVATION
- 10 **FIGURE 4**
THE SIX PRIMARY FUNCTIONS OF THE FINANCIAL SYSTEM
- 11 **FIGURE 5**
FINANCIAL INNOVATION MILESTONES
- 15 **FIGURE 6**
RECENT FINANCIAL INNOVATIONS
- 24 **FIGURE 7**
SEGMENTS OF IMPACT INVESTORS
- 26 **FIGURE 8**
RECAP OF GLOBAL FINANCIAL INNOVATIONS
- 28 **FIGURE 9**
SPIRIT OF COOPERATIVE COLLABORATION, 1915
- 29 **FIGURE 10**
CREDIT UNION INNOVATIONS IN THE 20TH CENTURY: A CANADIAN PERSPECTIVE
- 30 **FIGURE 11**
THE FILENE METHOD OF INNOVATION
- 31 **FIGURE 12**
HUMAN-CENTERED DESIGN: INTERSECTION OF DESIRABILITY, FEASIBILITY, AND VIABILITY

- 39** **FIGURE 13**
SAVE TO WIN RESULTS (DECEMBER 31, 2009)
- 39** **FIGURE 14**
PERCENTAGE OF NONSAVERS, ASSET POOR, AND LOW TO MODERATE
INCOME (LMI)
- 40** **FIGURE 15**
S2W RESULTS IN MICHIGAN, 2012 YEAR-END
- 40** **FIGURE 16**
AVERAGE S2W ACCOUNT BALANCES, 2012
- 42** **FIGURE 17**
ACTIVE S2W PROGRAMS

About the Authors



George Hofheimer

Chief Knowledge Officer, Filene Research Institute

As Filene's head of research and innovation, George arms credit unions with the creative yet practical ideas they need to be competitive. Prior to joining Filene, he spent eight years leading the executive education function for the Credit Union Executives Society (CUES).

Before his career in consumer finance, George lived for a number of years in Uzbekistan working for such disparate organizations as the US Peace Corps, Price Waterhouse, the American Council of International Education, and Qora-Tepa Village School. George earned an MBA from the University of Wisconsin–Madison. He previously served as board president at Willy Street Coop, a \$40M, 30,000-member grocery cooperative.



Andrew Downin

Innovation Director, Filene Research Institute

As innovation director, Andrew leads Filene's prestigious i³ (Ideas, Innovation, Implementation) program, along with subsequent testing of its financial product, service, and business model ideas. He's an i³ alum and championed the Centsus and WheelChoice ideas.

Andrew comes to Filene from SchoolsFirst Federal Credit Union in Santa Ana, California, where he served as manager of product development. While at SchoolsFirst, he was responsible for success in driving product development, optimizing current products, and meeting member service and financial goals. He has 15 years of experience in executive marketing, product development, and finance at several credit unions throughout Southern California. Andrew's industry expertise extends specifically to credit, debit, and prepaid card strategy and program development.

He graduated first in his MBA class at Pepperdine University and received his undergraduate degree in accounting from the University of Arizona. Andrew also is a certified public accountant.



Linda Young

Founder, ponderpickle

Linda Young is the founder of ponderpickle, a Canadian consulting group that works with organizations to translate consumer insights into innovative products and design meaningful corporate strategies for long-term success. Prior to launching ponderpickle, Linda was the director of research and products at Coast Capital Savings, Canada's second largest credit union, where she launched an award-winning product, You're the Boss Mortgage.

Throughout her career in industries such as media, telecommunications, gaming, and consumer finance, Linda has honed her skills connecting the dots of consumer behavior to design products and corporate strategies, but the most rewarding work has been seeing firsthand the power of people coming together to find common ground, generate ideas, and build real business solutions. In addition to running ponderpickle, Linda advises nonprofit organizations like XYBOOM Intergenerational Organization and Dream to Learn, both of which focus on bringing people together to collaborate and foster shared ideas to make the world a better place.

Linda has an undergraduate degree in economics and finance from Simon Fraser University and completed her post-graduate studies in international development at the University of British Columbia.

About Filene

Filene Research Institute is an independent, consumer finance think and do tank. We are dedicated to scientific and thoughtful analysis about issues affecting the future of credit unions, retail banking, and cooperative finance.

Deeply embedded in the credit union tradition is an ongoing search for better ways to understand and serve credit union members. Open inquiry, the free flow of ideas, and debate are essential parts of the true democratic process. Since 1989, through Filene, leading scholars and thinkers have analyzed managerial problems, public policy questions, and consumer needs for the benefit of the credit union system. We support research, innovation, and impact that enhance the well-being of consumers and assist credit unions and other financial cooperatives in adapting to rapidly changing economic, legal, and social environments.

We're governed by an administrative board made up of credit union CEOs, the CEOs of CUNA & Affiliates and CUNA Mutual Group, and the chairman of the American Association of Credit Union Leagues (AACUL). Our research priorities are determined by a national Research Council comprised of credit union CEOs and the president/CEO of the Credit Union Executives Society.

We live by the famous words of our namesake, credit union and retail pioneer Edward A. Filene: "Progress is the constant replacing of the best there is with something still better." Together, Filene and our thousands of supporters seek progress for credit unions by challenging the status quo, thinking differently, looking outside, asking and answering tough questions, and collaborating with like-minded organizations.

Filene is a 501(c)(3) not-for-profit organization. Nearly 1,000 members make our research, innovation, and impact programs possible. Learn more at filene.org.

"Progress is the constant replacing of the best there is with something still better."

—Edward A. Filene



612 W. Main Street
Suite 105
Madison, WI 53703

p 608.661.3740
f 608.661.3933

Publication #337 (9/14)